82. (New) The method of claim 80, wherein the reconstructing comprises using data collected

from an MRI procedure.

83. (New) The method of claim 80, wherein the reconstructing comprises using data collected

from a PET procedure.

84. (New) The method of claim 80, wherein the reconstructing comprises generating a

volumetric image.

85. (New) The method of claim 80, wherein the analyzing comprises determining an amplitude

of the physiological movement of the patient.

86. (New) The method of claim 80, wherein the gating the medical procedure comprises

synchronizing the data samples and acquired image data to a common time base;

identifying an interval of interest; and

generating an image using image data associated with the interval of interest.

87. (New) A method for gating a medical procedure, comprising:

collecting data samples representative of a physiological movement of a patient;

acquiring image data of at least a part of the patient over a time interval;

synchronizing the data samples and the image data to a common time base;

analyzing the data samples to identify an interval of interest; and

generating an image using image data associated with the interval of interest.

88.   (New) The method of claim 87, further comprising associating the data samples that correspond to the interval of interest with corresponding image data.

89.   (New) The method of claim 87, wherein the generating comprises performing a computed tomography procedure.

90.   (New) The method of claim 87, wherein the generating comprises performing an MRI procedure.

91.   (New) The method of claim 87, wherein the generating comprises performing a PET procedure.

92.   (New) The method of claim 87, wherein the time interval comprises at least one physiological cyclic interval.

93.   (New) The method of claim 87, wherein the generating comprises constructing a volumetric image.

94.   (New) The method of claim 87, wherein the analyzing comprises determining an amplitude of the physiological movement of the patient.